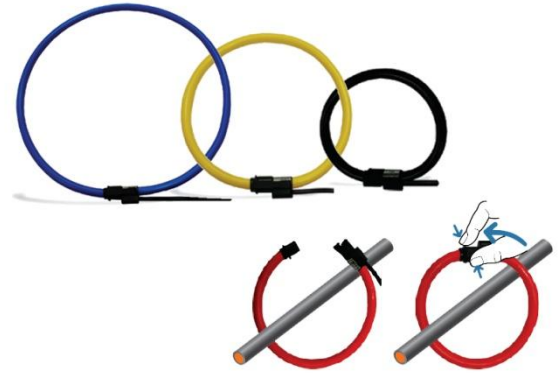


## FRC Series Flexible Rogowski Coil

FRC is a flexible current transducer based on Rogowski principle, particularly suitable for measurement in combination with portable devices. FRC rogowski coils are available in different sizes and can be supplied according to customer's design, therefore they can be used in all those applications, in which traditional transducers are not fitting due to its size and/or weight. Due to its specific features, FRC flexible rogowski coils is an extremely comfortable solution for current measurement and can be used in a number of cases where traditional current transducer is not the adequate solution.



### FEATURES:

- Suitable to measure currents from A to hundreds of kA.
- High linearity.
- The absence of magnetic core grants a wide frequency response to be suitable for measurement of harmonic content and transients.
- Very useful with large size or awkward shaped conductors or in places with limited access.
- Non-intrusive, no power drawn from the main.
- Not damaged by large overloads.
- There is no danger from open-circuited secondary.

### APPLICATIONS:

- Measuring devices, lab instrumentation
- Harmonics and transients monitoring
- Very high current monitoring
- Power quality monitoring
- Power control systems
- DC ripple measurement
- Electric furnace
- Relay protection

**CERTIFICATES:** **CE** **RoHS**

### SPECIFICATION:

#### TRANSDUCER

Coil length:	210mm/350mm/420mm/510mm/600mm/800mm
Inner diameter:	60mm/103mm/125mm/155mm/180mm/245mm (±10%)
Coil cross section:	6.5±0.2 mm/8±0.2 mm/10±0.2 mm
Fastening:	bayonetholder
Material:	thermoplastic UL94-V0
Color:	coil: black, red, yellow, blue (other color could be customized) closing unit: black

**CONNECTION CABLE**

Type:	cable (with 3-wire terminal) cable + BNC/Oscilloscope Interface
Length:	3000 mm (standard), other length could be customized.
Material:	Xy23/0.1 T s/2C+A+B
Color:	black

**ELECTRICAL CHARACTERISTICS**

Output level (RMS):	<b>40mV/1000A @50Hz</b> <b>80mV/1000A @50Hz</b> <b>100mV/1000A @50Hz</b>
Accuracy:	class 1.0 (coil must be calibrated with amplifier/integrator load impedance)
Linearity (10% to 100% of range):	±0.1% of reading
Frequency range/Bandwidth:	approx 10Hz to 10MHz
Phase shift:	90°
Conductor position sensitivity:	±2% Maximum
Influence of external field:	±2% Maximum

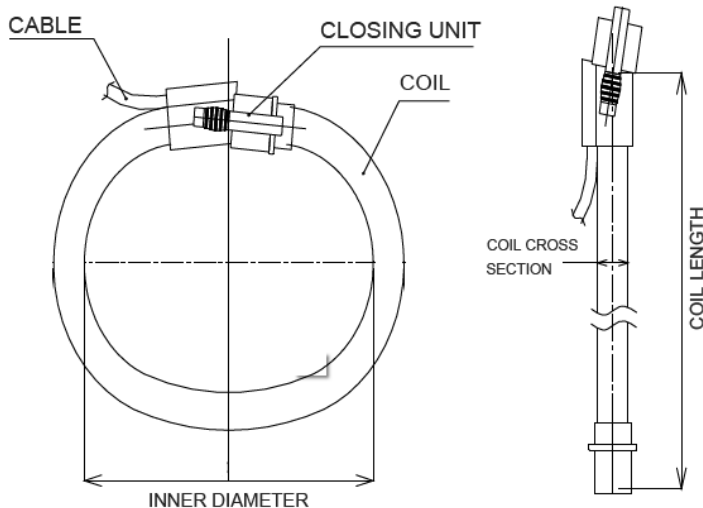
**ENVIRONMENTAL CONDITIONS**

Operating temperature:	from -20°C to +75°C
Storage temperature:	from -30°C to +75°C (suggest normal temperature )

**Safety**

Working voltage(max):	1000Vrms CATIII 600Vrms CATIV
Hipot test	7400Vrms @50/60Hz 1min.

**SCHEMATIC DIAGRAM:**



**CABLE CONNECTION:**



CABLE (with 3-wire terminal)



CABLE +BNC

**MODEL CODE:**

Model	Coil length (mm)	Inner diameter (mm)	Output level (RMS)	Coil color
FRC	210 mm	60mm ±10%	40mV/1000A @50Hz	Black, Red, Yellow
FRC	350 mm	103mm ±10%	40mV/1000A @50Hz	Black, Red, Yellow
			80mV/1000A @50Hz	Black, Red, Yellow, Blue
FRC	420 mm	125mm ±10%	40mV/1000A @50Hz	Black, Red, Yellow
			80mV/1000A @50Hz	Black, Red, Yellow, Blue
			100mV/1000A @50Hz	Black, Red, Yellow
FRC	510 mm	155 mm ±10%	80mV/1000A @50Hz	Black, Red, Yellow, Blue
			100mV/1000A @50Hz	Black, Red, Yellow
FRC	600 mm	180 mm ±10%	100mV/1000A @50Hz	Black, Red, Yellow
FRC	800 mm	245 mm ±10%	100mV/1000A @50Hz	Black, Red, Yellow

**Flexible Rogowski Coil With G1 Integrator**

G1 is a USB-sized integrator, could be combined with any model and any size of FRC series rogowski coils to amplify the output signal. It's essential to equalize and shift by 90° the output signal from the rogowski coils. It consists of an active electronic circuit with negligible offset and a good linearity. Flexible rogowski coils with G1 integrator meets customer requirements for different outputs and allows for more interfacing with more measurement devices.



**SPECIFICATION:**

ELECTRICAL CHARACTERISTICS	
Current range	<b>1A - 10KA</b>
Output level (RMS):	<b>333mV</b> (any volt signal within 3V could be customised)
Accuracy:	class 1.0 (coil must be calibrated with amplifier/integrator load impedance)
Linearity (10% to 100% of range):	±0.1% of reading
Frequency range/Bandwidth:	approx 10Hz to 100KHz
Conductor position sensitivity:	±2% Maximum
Inuence of external field:	±2% Maximum

**G1 INTEGRATOR:**



※ When you make the order, please notice what's the input current and output voltage signal do you require. The output volt could be any one within 3V, like 333mV, 1V, 3V and so on.

### Flexible Rogowski Coil With G2 Integrator

G2 is a handheld type integrator, could be combined with any model and any size of FRC series rogowski coils to achieve five current range measurement. It's essential to equalize and shift by 90° the output signal from the rogowski coils. It consists of an active electronic circuit with negligible offset and a good linearity. The output signal can be used in oscilloscope, digital multimeter or data logger recording instrument.



### SPECIFICATION:

#### ELECTRICAL CHARACTERISTICS

Current range:	<b>1-200A/500A/1000A/2000A/5000A 1-500A/1000A/2000A/5000A/10000A</b>
Output level (RMS):	<b>1V</b>
Accuracy:	class 1.0 (coil must be calibrated with amplifier/integrator load impedance)
Linearity (10% to 100% of range):	±0.1% of reading
Frequency range/Bandwidth:	approx 10Hz to 100KHz
Conductor position sensitivity:	±2% Maximum
Inuence of external field:	±2% Maximum
Output terminals:	BNC plug

### G2 INTEGRATOR:



※ When you make the order, please notice what kind of current range do you require.

**HEYI Electrical Co., Ltd.**

#21 SHANGYOU NORTH ROAD, LIU SHI, YUE QING, ZHE JIANG, CHINA- Tel/Fax: +86-577-62659558

Email: [heyi@heyiele.com](mailto:heyi@heyiele.com) Web.: [www.heyiele.com](http://www.heyiele.com)